

Adding, Subtracting, Multiplying, and Dividing Fractions

*Note: To add or subtract two fractions with different denominators, find a common denominator.

Ex 1: Solve $\frac{6 \cdot 3}{6 \cdot 5} + \frac{5 \cdot 5}{6 \cdot 5}$

$$= \frac{18}{30} + \frac{25}{30}$$

$$= \frac{43}{30} \text{ or } 1\frac{13}{30}$$

*Note: To add or subtract mixed fractions, change them to improper fractions.

Ex 2: Solve $3\frac{2}{3} - 2\frac{1}{4}$

$$= \frac{3 \cdot 3 + 2}{3} - \frac{2 \cdot 4 + 1}{4}$$
$$= \frac{4 \cdot 11}{4 \cdot 3} - \frac{9 \cdot 3}{4 \cdot 3}$$
$$= \frac{44}{12} - \frac{27}{12}$$
$$= \frac{17}{12} \text{ or } 1\frac{5}{12}$$

*Note: To multiply fractions, multiply the numerator and the denominator.

Ex 3: Solve $\frac{3}{4} \times \frac{5}{6}$

$$= \frac{15 \div 3}{24 \div 3}$$
$$= \frac{5}{8}$$

*Note: To divide two fractions:

1. take the reciprocal of the second fraction
2. change the sign to multiplication

Reciprocal: a fraction whose numerator and denominator are interchanged

ex: $\frac{1}{a}$ Reciprocal = $\frac{a}{1}$

Ex 4: Solve

$$\frac{3}{4} \div \frac{5}{6} = \frac{3}{4} \times \frac{6}{5} = \frac{18 \div 2}{20 \div 2} = \frac{9}{10}$$

Homework: p.8 #50-68 all